

Over southern districts from Texas eastward the month was mainly the warmest November of record, and somewhat less pronounced conditions existed over much of the Middle Atlantic Coast States. The extent of the temperature departures is shown on Chart III.

Minimum temperatures of 20° or more below zero were reported from North Dakota and Minnesota and they were nearly as low over some near-by areas and in the high elevations of the Rocky Mountain region. The first killing frosts of the season did not occur until about the 5th and 6th over a large portion of the great agricultural regions of the Central States, much later than usual and too late to do much damage as most crops had fully matured before that time.

#### PRECIPITATION

There was a considerable deficiency in precipitation over the middle and southern Plains, particularly in the western portions of Kansas and thence southward to the Rio Grande, and severe drought continued in portions of the Southeastern States, notably in Florida where, locally it was the driest November of record and winter, truck was materially damaged or planting and germination delayed. In other portions of the country there was a very general excess of precipitation as compared with the normal fall for November, and it was generally well distributed through the month. Over an extensive area from the Great Lakes and Ohio Valley eastward it was decidedly wet and at many points in the lake region and from Pennsylvania northeastward to New England the monthly totals were the greatest ever known in November.

The general excess of precipitation from the Mississippi Valley eastward, except in some southeastern sections,

assured a good supply of soil moisture, and similar conditions existed over the sections from the Rocky Mountains westward.

#### SNOWFALL

No unusually heavy snows occurred, though in the northern tier of States from the Rocky Mountains to the Great Lakes snows were rather frequent and the total falls somewhat greater than normal.

In the western mountains there were rather heavy falls in portions of Wyoming and Colorado, but elsewhere snow was rather light due to the very general warmth. The extent of snowfall and the depths over the various areas are shown on Chart VII.

But little snow remained on the ground at the end of the month save in the higher mountains of the West.

#### RELATIVE HUMIDITY

The amount of moisture in the atmosphere as shown by the average relative humidity was above normal over nearly all parts of the country, only a few localities, mostly in the central and southern Great Plains, showing averages less than normal. The averages were unusually high in the Plateau and some near-by portions of the Pacific Coast States.

#### SUNSHINE AND CLOUDS

The month had a large excess of cloudy weather in the upper Mississippi Valley and near-by areas, where the number of cloudy days was far above normal and in many instances the greatest for November and in some the greatest for any month of record. Over many southern sections there was much clear weather.

#### SEVERE LOCAL STORMS, NOVEMBER, 1927

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the annual report of the chief of bureau]

Place	Date	Time	Width of path, yards <sup>1</sup>	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Columbia, Mo.	1	P. m.			\$7,000	Thunderstorm and hail.	Damage confined to window glass, roofs of houses and automobile tops; some loss to wire service companies.	Official, U. S. Weather Bureau.
Lower Lake Michigan area.	11					Wind and severe thunderstorms.	Plate-glass windows broken; many houses damaged; power lines affected; lake traffic delayed.	Do.
Guthrie, Okla. (near)	14	6 p. m.	4 mi.		3,500	Heavy hail.	Roofs and crops badly damaged.	Do.
Caddo County, Okla. (southwest part).	14	6 p. m.	6 mi.		12,000	do.	Damage chiefly to crops over path 15 miles long.	Do.
Pensacola, Fla.	16	5 a. m.			1,200	Severe thunderstorm.	Roofs and windows damaged and wires disarranged over small area.	Do.
Harrisburg, Pa., and vicinity.	17	1:45 p. m.			20,000	Electrical and wind.	Buildings and streets damaged.	Do.
Eastern Fairfax County, Va., to western Prince Georges County, Md.	17	2:15-3 p. m.	16-260		690,000	Tornado.	Many buildings damaged or completely demolished; 31 persons injured.	Do.
Yellow House to Spangville, Pa.	17	4:30-6 p. m.			200,000	Small tornado.	One school house and several homes and farm buildings wrecked; bridge torn away.	Do.
Boulder, Colo., and vicinity.	28				15,000	Wind.	Windows broken; many small buildings blown down; houses and barns damaged; power and telephone lines twisted.	Do.
Grand Haven, Mich.	28					do.	Plant under construction wrecked; chimneys, garages, and other small buildings damaged.	Do.
Tiffin, Ohio, and vicinity.	28				6,000	Tornadic wind and electricity.	One home severely damaged; other property damage in vicinity.	Do.
Cumberland, Md.	30	P. m.			20,000	Gale.	Glass factory wrecked; 3 airplanes badly damaged.	Do.
Lexington, Ky.	30				25,000	Severe thunderstorm.	Roofs, chimneys, telephone and telegraph lines damaged.	Do.
Parkersburg, W. Va.	30					High wind.	Wire systems damaged.	Do.

<sup>1</sup> "Mi." signifies miles instead of yards.